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ABSTRACT

This study examined the relationship between qualitative and quantitative indicators of social support in the prediction of depression. Quantitative indicators were examined with regard to their direct effects on depression as well as their indirect effects through their relationship to perceived social support. Subjects were 301 community-dwelling elderly persons who were age 65 or older and in good physical and mental health. Subjects were interviewed three times; depression was assessed by the Zung Self-Rating Depression Scale, perceived social support was assessed by the Social Provisions Scale, and the networks of social relationships that provided respondents with each of the social provisions were assessed through personal interviews. The results revealed that perceived qualitative social support had a significant negative effect on later depression. Qualitative social support also was significantly correlated with initial levels of depression. Perceptions of being supported in ways such as through social integration, reassurance of one's worth, guidance from others, assistance from others, and the opportunity to nurture others had an important effect on whether or not an elderly subject became depressed. Findings support the contention that some minimum quantity of support is necessary to provide the qualities of support. Furthermore, quantitative social network characteristics, density and number of kin, predicted depression in the elderly over and above their effects on the perceived qualitative aspects of support. (NB)

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Qualitative Versus Quantitative Social Support as a Predictor of Depression in the Elderly

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Abstract

Qualitative and quantitative measures of social support were examined in a model for the prediction of depression. Both qualitative and quantitative aspects of social support are important for the prediction of depression. Qualitative social support, which is predictive of depression, is determined in part by social network characteristics. Quantitative social network characteristics, network density and number of kin, predicted depression in addition to their effects on perceived, qualitative social support. Network density did not have an effect on perceived levels of social support but did have an effect on later depression. The number of kin in ones network had a counter-intuitive effect on depression--more kin was associated with greater levels of depression. This finding supports recent discussions of the positive and negative implications of support.

Qualitative Versus Quantitative Social Support as a Predictor of Depression in the Elderly

The positive relationship between social support and physical and mental health outcomes has been widely noted in the literature (for recent reviews, see Broadhead et al., 1983; Cohen & Wills, 1985; Sarason & Sarason, 1985). Social support has been an area of extensive study which, regrettably, has suffered from a lack of specificity in conceptualization and measurement (House & Kahn, 1985). Quantitative aspects of social networks such as size and density have been found to relate cross-sectionally, retrospectively, and prospectively to lower rates of psychological and physical disorders and mortality (Berkman & Syme, 1979; Gallo, 1982; House & Kahn, 1985; House, Robbins, & Metzner, 1982; Henderson, Byrne, & Duncan-Jones, 1982; Williams, Ware, & Donald, 1981). Social networks, however, may or may not be supportive (Wellman, 1981). Several authors have also suggested that it is the qualitative or functional characteristics of social support (such as emotional support, tangible aid) which are responsible for positive mental health outcomes (Thoits, 1985). Studies have found qualitative aspects of social support to be significantly related to mental health. (Aneshensel & Frerichs, 1982; Cutrona, 1984;

Holahan & Moos, 1981; Mallinckrodt & Fretz, in press; Schaefer, Coyne, & Lazarus, 1981).

Several studies have attempted to compare qualitative and quantitative indicators of social support as predicters of physical and mental health. Instrumental and emotional functions of social support (e.g., physical and financial assistance, feelings of being loved) were significantly related to lower levels of coronary artery disease, whereas structural characteristics of the social network (size, intimate or formal ties) were not related (Seeman & Syme, 1987). In predicting subjective assessments of health among the elderly, the proportion of explained variation was greatly increased when quantitative assessments of social support were replaced by the more qualitative assessment of network satisfaction (Antonucci & House, 1983). Blazer (1982) reported that, whereas roles and available attachments, frequency of social interactions, and perceived social support were all significant predictors of mortality in an elderly sample, perceived social support (subjective appraisal of the social network) had the greatest predictive value. A review of literature comparing qualitative and quantitative measures of social support concluded that quality of social support is a stronger predictor

of health outcome than quantity measures, and quantity of social support is often not significantly related to well-being (Broadhead et al, 1983).

Although quality of social support may be the more critical variable, some minimum quantity of social support is needed to achieve that quality (Antonucci, 1985). This suggests a model in which qualitative social support operates in conjunction with quantitative variables. Supporting this conceptualization, a path analysis of subjective and objective aspects of social integration indicated that the subjective perception of integration is the critical intervening variable between objective integration and morale (Laing, Dvorkin, Kahana, & Mazian, 1980). This study examines the relationship between qualitative and quantitative indicators of social support in the prediction of depression. The present model hypothesizes that perceived, qualitative social support will have a direct effect on depression. Quantitative indicators will be examined with regard to direct effects on depression as well as indirect effects through their relationship to perceived social support.

Method

Subjects

Subjects were 301 community-living elderly persons from a primarily rural county containing a single metropolitan area (population 100,000) located in the midwest. Of the total sample, 59.8% were female and white, which was consistent with the demographic characteristics of the county. The sample was somewhat younger than the population with nearly 3/4 aged 65-74. Table 1 shows a comparison of sample and population demographic characteristics. Potential participants were randomly sampled from the mailing list of a local agency on aging. They were first sent a letter introducing the study and then contacted by telephone. Approximately 63% of those contacted by telephone indicated they were willing to participate. During that call, a brief screening procedure was employed to insure participants were age 65 or older and in good physical and mental health.

Participants were interviewed three times. Participants were paid $5 for each personal interview they completed. A total of 17 individuals discontinued participation over the course of the study. Six of these individuals died. The remaining subjects voluntarily withdrew from the study due to loss of

interest in continued participation (n = 7), serious illness (n = 2), or serious illness of spouse (n = 2). To evaluate whether or not the loss of these individuals biased the sample, a series of analyses was conducted that compared the drop-outs to those persons who remained in the study in terms of sociodemographic, stress, social support, and physical and mental health characteristics. No significant differences were found, indicating that drop-outs did not appear to bias the sample.

Measures

Social Provisions Scale. The Social Provisions Scale (SPS; Russell & Cutrona, 1984) assesses percieved social support as represented by the "provisions of social relationships" identified by Weiss (1974). The SPS is composed of 24 items rated on 4-point Likert-type scales. The 24 items yield six subscales of four items each, measuring each of the six social provisions. The authors defined the six social support "provisions" as: (a) attachment, provided by intimate relationships in which the person receives a sense of security and safety (e.g., "I lack a feeling of intimacy with another person"); (b) social integration, provided by a network of social relationships in which individuals share interests and concerns (e.g., "I feel

a part of a group of people who share my attitudes and beliefs"); (c) reassurance of worth, provided by relationships in which the person's skills and abilities are acknowledged (e.g., "There are people who admire my talents and abilities"); (d) guidance, provided by relationships with trustworthy and authoritative individuals who can provide advice (e.g., "There is no one I feel comfortable talking about problems with"); (e) reliable alliance, derived from relationships in which the person can count on others for assistance under any circumstances (e.g., "There are people I can count on in an emergency"); and, (f) opportunity for nurturance, derived from relationships in which the person feels responsible for the well-being of another (e.g., "There is no one who really relies on me for their well-being").

Social network assessment. The networks of social relationships that provided the respondents with each of the social provisions were assessed through personal interviews. Participants were asked, for example, "Who are the people you turn to for advice or guidance?" Lists of up to five network members were collected within each of the six social provision categories. Network members were then combined into a single list of up to 30 people. Frequency of contact with network

members was determined by the number of times the respondent visited with each member in the past month. Lists of kin and non-kin network members were then compiled from the social network list. Network density was assessed by asking the respondent to indicate how many kin and non-kin network members each individual network member knew well enough to engage in a conversation. A density score ranging from zero to one was computed from those numbers.

Zung Self-Rating Depression Scale. The Zung Self-Rating Depression Scale was designed as a brief measure to assess the affective, psychological, and physiological symptoms of depression (Zung, 1965, 1973). McGarvey, Gallagher, Thompson, and Zelinski (1982) reported internal consistency reliablity (coefficient alpha) of .76 for individuals between the ages of 65 and 74, and .59 for individuals over age 74, indicating that the Zung is an appropriate measure for older adults.

Procedure

The data used in the present study were collected as part of an extensive longitudinal study of the etiological role of life stress and social support in the physical and mental health of the elderly (Russell, 1986). In that study, a multiwave panel design was

employed. Three in-home personal interviews lasting two to three hours were conducted at six month intervals over a twelve month period by trained graduate level research assistants. These interviews consisted of a variety of measures of life stress, social support, and indicators of physical and mental health.

Results

Figure 1 presents the causal model that was tested in diagrammatic form. The model hypothesized that social support is determined in part by characteristics of the respondent's social network. Network characteristics were also hypothesized to determine the level of depression reported by the respondent at the initial interview. A correlation between initial levels of depression and qualitative social support was also included in the model. This association reflected the ambiguity in interpretting any relationship between these two variables in causal terms. That is, high levels of social support may lead the individual to feel less depressed at Time 1, or individuals who are depressed at Time 1 may simply evaluate their social support more negatively. Finally, social network characteristics, qualitative social support, and Time 1 depression were hypothesized to influence the level of

depression reported by respondents at Time 2. If qualitative social support mediates the effects of social network characteristics on later depression, then the direct causal paths from the social network characteristics to later depression should be non-significant.

This model was tested using the maximun likelihood estimation procedure of LISREL VI (Jöreskog & Sörbom, 1984). In testing the model, the variables enclosed in rectangles (i.e., frequency of contact, number of kin, number of non-kin, and density of the network) were specified in the LISREL program in manifest variable form, whereas the variables enclosed in ovals (i.e., Time 1 and Time 2 depression, social support) were specified as latent variables in the LISREL program. Scores on the six social provisions were used to operationalize the social support variable, whereas the items from the Zung depression scale were randomly divided into three groups to operationalized the depression variable. Although not indicated in Figure 1, correlations were included in the model among the exogenous social network variables. Also included in the model were correlated error terms between the parallel measures of depression that were administered at Time 1 and Time 2, to remove the effects of

correlated measurement error on the results. Finally, uncorrelated residual variables were included in the model for the endogenous variables of social support, Time 1 depression and Time 2 depression, to reflect the influence of other causal variables that were not included in this model.

The overall results of this model indicated that it provided a good fit to the data, χ^2 (84, N = 283) = 203.42, $p < .001$, GFI = .913. Figure 1 presents the path coefficients and results of the significance tests for each causal path. All of the social network characteristics except density were found to be significantly related to qualitative social support. Greater numbers of kin and non-kin as well as greater amounts of social contact were associated with higher levels of perceived social support. In combination, these variables explained 22% of the variation in social support. As expected, perceived social support and Time 1 depression were significantly correlated with one another ($r = -.261$). Thus, higher levels of social support were associated with lower levels of depression. However, none of the social network characteristics were associated with initial levels of depression.

As would be expected, initial levels of depression

were significantly associated with Time 2 depression. Higher levels of social support were also found to be associated with lower levels of depression at Time 2, after controlling for the impact of initial levels of depression. Thus, perceived social support appeared to be causally related to changes in depression over time. In contrast to expectations, the number of kin and density of the social network were found to be significantly related to Time 2 depression. Greater numbers of kin the social network was associated with increased depression at Time 1, whereas mmore dense social netowrks (i.e., where more members knew one another) was associated with decreased depression at Time 2. In combination, these variables accounted for 33% of the variation in Time 2 depression.

Discussion

Qualitative and quantitative indicators of social support were examined as predictors of depression. As suggested by the literature, a model was tested which included both direct and indirect effects of quantitative indicators of social support. It was hypothesized that network characteristics would affect depression through their influence on perceived social support.

As expected, perceived qualitative social support

had a significant negative effect on later depression. Qualitative social support also was significantly correlated with inital levels of depression. Perceptions of being supported in ways such as through social integration, reassurance of one's worth, guidance from others, assistance from others, and the opportunity to nurture others has an important effect on whether or not an elderly person will become depressed.

Quantitative network characteristics do indeed appear to be important conditions within which perceived social support exists. Numbers of kin and non-kin members, a reflection of the size of ones social network, and the frequency of contact with network members were significantly related to qualitative social support. This finding supports Antonucci's (1985) suggestion that some minimum quantity of support is necessary to provide the qualities of support.

The direct effects of quantitative social network characteristics on depression reveal some interesting relationships. None of the network characteristics were significantly related to initial levels of depression. Number of kin and network density were, however, significantly related to later depression. A

greater number of kin network members was related to increased depression over time. This counter-intuitive finding might be due to the stress that kin may add to ones life through demands on time, energy, and other emotional and physical resources. It should be noted, however, that the number of kin in one's network is related to higher levels of perceived social support. Family members attempts to be supportive may also be seen as inappropriate or judged to be of lesser value than the supportive behaviors of others (Antonucci, 1985).

Lower levels of depression are directly related to having a social network in which members know and interact with one another. Network density does not, however, affect depression indirectly through an influence on qualitative social support. In other words, the individual does not perceive any differences in the supportiveness of a dense versus non-dense network, but he or she will be less depressed if the network is dense. This process would be an interesting question for future research.

In conclusion, quantitative social network characteristics, density and number of kin, predicted depression in the elderly over and above their effects on the perceived, qualitative aspects of support.

Network density appears to have effects on depression which are completely independent of perceived levels of support. Future research should include these quantitative measures as well as qualitative measures of social support. Individuals who work with the elderly population should also be cognizant of the social networks of the elderly in addition to assessing how much support elderly clients perceive. Interventions which enhance the formation of dense networks of non-kin individuals might be helpful for elderly persons who are experiencing feelings of depression.

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Table 1

Comparison of Sample and Population Characteristics

	Sample	Population	χ^2
Sex:			
Male	40.2%	37.1%	1.54
Female	59.8%	62.9%	
Race:			
Caucasion	99.7%	99.5%	.51
Non-Caucasion	0.3%	0.5%	
Location:			
Urban	49.8%	81.3%	73.30*
Rural	50.2%	18.7%	
Age:			
65-74	73.1%	56.6%	41.67*
75-84	23.2%	32.5	
85+	2.7%	11.0%	

*$p < .001$.

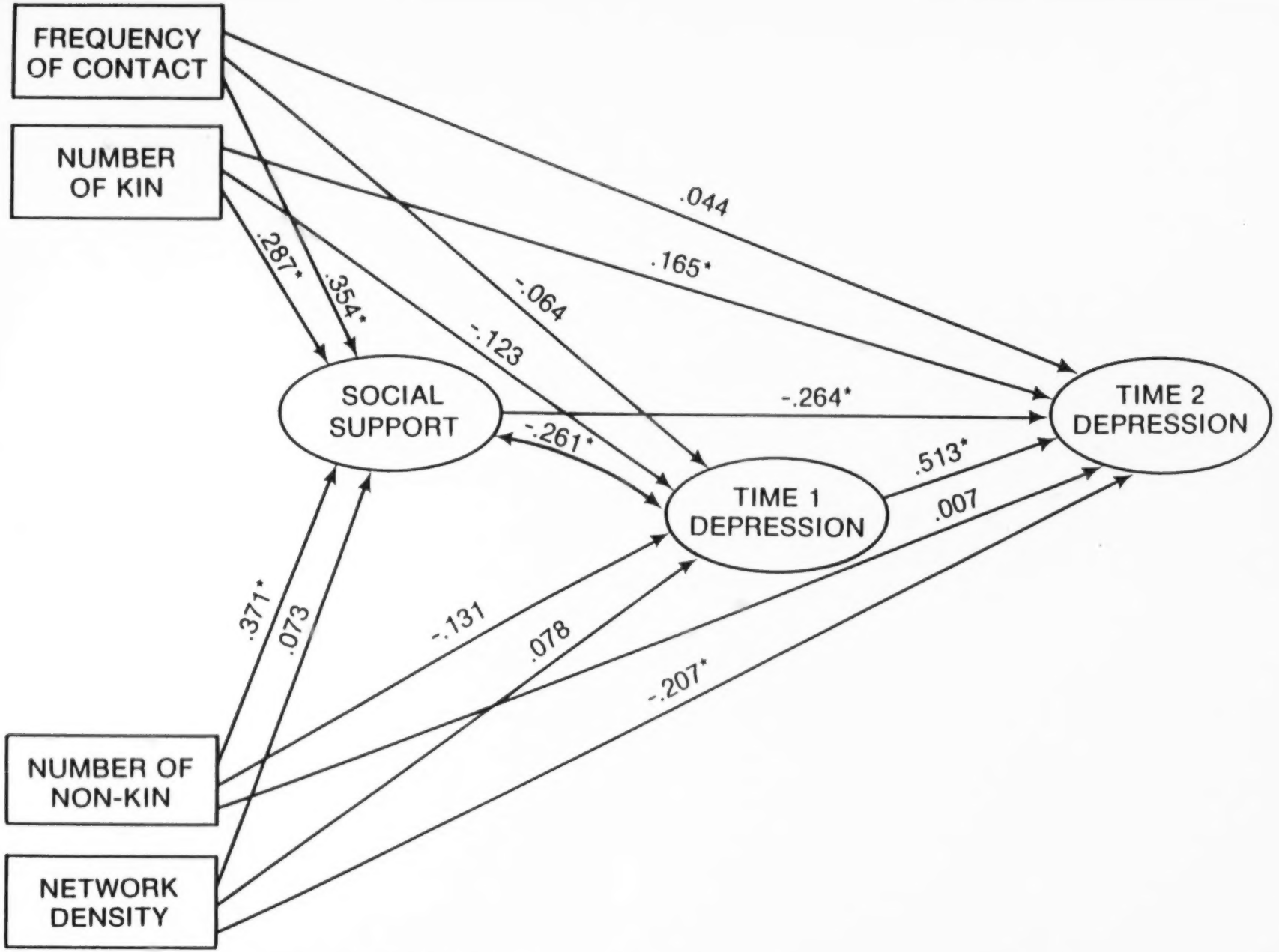

Figure 1. Social networks, social support, and depression model. *$p < .05$.